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AMENDMENT

2 In the Claims:

3 For the Examiner's convenience all pending claims are presented herein. Those
4 claims that remain unchanged by this amendment are prefixed with "(Unchanged)".

5 Please cancel claim 14, without prejudice. Please amend claims 2, 4, and 20 as
6 follows:

7 1. (Unchanged) For use in a communications network having a plurality of nodes
8 wherein a node may encode real-time information for propagating over said
9 network, a method of processing said real-time information comprising the steps
10 of:

11 providing said node with a plurality of output buffers;

12 (a) electronically capturing said real-time information and converting
13 it into electronic data;

14 (b) differentially encoding said electronic data using a previously
15 stored transmit image as a base to produce differential data;

16 (c) storing said differential data in one of said plurality of output
17 buffers;

18 (d) monitoring said network for access to propagate said differential
19 data;

20 repeating steps (a)-(d) until said node may propagate said differential data over
21 said network;

22 transmitting data over said network from the one of said plurality of output
23 buffers providing a best differential data to a receiving node on said

25 network, wherein said best differential data represents a differential data
26 whose use in conjunction with the previously stored transmit reference
27 image produces an image that approximates a current frame better than
28 use of other differential data contained in said plurality of output buffers;
29 and
30 calculating a new transmit reference image based on said best differential data and
31 said previously stored transmit reference image.

32 2. (Amended) An apparatus comprising:
33
34 an encoder for producing encoded real-time information;
35 a transmit reference buffer for storing a current transmit reference;
36 compression circuitry coupled to the encoder and to the transmit reference buffer
37 for producing compressed data based upon the current transmit reference
38 and the encoded real-time information;
39 a plurality of output buffers coupled to the compression circuitry for storing the
40 compressed data; and
41 a network interface coupled to the plurality of output buffers, the network
42 interface for interfacing with a network, for determining a selected output
43 buffer from the plurality of output buffers and for transmitting data over
44 the network from the selected output buffer, the selected output buffer
45 containing compressed data which accommodates one or more
46 characteristics of the network better than [at least] compressed data in at
47 least one [another] other buffer of the plurality of output buffers.

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1 3. (Unchanged) The apparatus of claim 2, wherein the selected output buffer
2 contains compressed data which accommodates one or more characteristics of the
3 network better than compressed data in all other buffers of the plurality of output
4 buffers.

1 4. (Amended) An apparatus for transmitting real-time information over a
2 network, the apparatus comprising:
3
4 an encoder for producing encoded real-time information;
5 a transmit reference buffer for storing a current transmit reference;
6 compression circuitry coupled to the encoder and to the transmit reference buffer
7 for producing compressed data based upon the current transmit reference
8 and the encoded real-time information; and
9 a plurality of output buffers coupled to the compression circuitry for buffering the
10 compressed data, each of the plurality of output buffers having [a]
11 contents, the contents of a selected output buffer of the plurality of output
12 buffers to be transmitted onto a data communications channel of a network
13 based upon one or more characteristics of the data communications
14 channel.

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1 5. (Unchanged) The apparatus of claim 4 further comprising a network interface
2 coupled to the plurality of output buffers, the network interface for interfacing
3 with the network, the network interface determining the selected output buffer and
4 transmitting data over the network from the selected output buffer.

- 1 6. (Unchanged) The apparatus of claim 5, wherein the selected output buffer
2 contains compressed data which, when used in conjunction with the current
3 transmit reference, accommodates the one or more characteristics of the data
4 communications channel better than compressed data from at least another buffer
5 of the plurality of output buffers.
- 1 7. (Unchanged) The apparatus of claim 5, wherein the selected output buffer
2 contains compressed data which, when used in conjunction with the current
3 transmit reference, accommodates the one or more characteristics of the data
4 communications channel better than compressed data from all other buffers of the
5 plurality of output buffers.
- 1 8. (Unchanged) The apparatus of claim 4, wherein the compressed data comprises
2 a differential between the encoded real-time information and the current transmit
3 reference.
- 1 9. (Unchanged) The apparatus of claim 4, wherein the one or more characteristics
2 of the data communications channel include bandwidth availability on the data
3 communications channel.
- 1 10. (Unchanged) The apparatus of claim 4, wherein the one or more characteristics
2 of the data communications channel include burstiness of traffic on the data
3 communications channel.
- 1 11. (Unchanged) The apparatus of claim 4, wherein the one or more characteristics
2 of the data communications channel include transmission delay on the data
3 communications channel.

- 1 12. (Unchanged) The apparatus of claim 4, wherein the encoded real-time
2 information includes video information.
- 1 13. (Unchanged) The apparatus of claim 4, wherein the encoded real-time
2 information includes audio information.
- 1 15. (Unchanged) An apparatus comprising:
2
3 an encoder for producing encoded real-time information;
4 a transmit reference buffer for storing a current transmit reference;
5 compression circuitry coupled to the encoder and to the transmit reference buffer
6 for producing compressed data based upon the current transmit reference
7 and the encoded real-time information;
8 a plurality of output buffers coupled to the compression circuitry for storing the
9 compressed data; and
10 a network interface coupled to the plurality of output buffers, the network
11 interface for selecting a selected output buffer of the plurality of output
12 buffers by determining, with reference to one or more predetermined
13 coding strategies, whether compressed data from the selected output buffer
14 is appropriate for transmission to a receiving node.
- 1 16. (Unchanged) The apparatus of claim 15, wherein the one or more predetermined
2 coding strategies include minimizing artifacts.

- 1 17. (Unchanged) The apparatus of claim 15, wherein the one or more predetermined
2 coding strategies include allocating available bandwidth to achieve a higher frame
3 rate.
- 1 18. (Unchanged) An apparatus comprising:
2
3 an encoder for producing encoded real-time information;
4 compression circuitry coupled to the encoder for producing compressed data
5 based upon a previously stored transmit reference and the encoded real-
6 time information;
7 a plurality of output buffers coupled to the compression circuitry for storing the
8 compressed data; and
9 a network interface coupled to the plurality of output buffers, the network
10 interface transmitting compressed data from a selected output buffer of the
11 plurality of output buffers, the compressed data from the selected output
12 buffer when used in conjunction with the previously stored transmit
13 reference approximating a next frame expected by a receiving apparatus.
- 1 19. (Unchanged) A method of transmitting data over a network comprising the steps
2 of:
3
4 encoding the data by determining the differences between the data and a transmit
5 reference to produce differential data;
6 storing the differential data in one of a plurality of output buffers;

7 selecting one of the plurality of output buffers as a current transmit buffer based
8 upon one or more characteristics of a data communications channel of a
9 network; and
10 transmitting differential data from the current transmit buffer over the network.

Sub B1 1 20. (Amended) A method of transmitting real-time data over a network comprising
2 the steps of:
3
4 encoding the real-time data by determining the differences between the real-time
5 data and a transmit reference to produce differential data;
6 storing the differential data in one of a plurality of output buffers;
7 selecting one of the plurality of output buffers as a current transmit buffer by
8 determining whether the differential data in a particular transmit buffer
9 accommodates [the] one or more characteristics of the network better than
10 differential data in at least [another] one other buffer of the plurality of
11 output buffers; and
12 transmitting differential data from the current transmit buffer over the network.

A3 concept